

**ABSTRACT**

A thin-film optical recording medium and compatible materials is disclosed. When the transparent layer and the reflecting layer of the present invention are exposed to a light beam, the two layers react to form a semi-transparent reflective alloy/compound area. The presence of such area (1) decreases the effective optical thickness of the transparent layer and/or (2) forms a region of changed optical  $n$  &  $k$  and/or (3) changes the optical polarization angle. At least one of the above three effects produces an optical contrast before and after the recording from which the signal modulation required for reading the optical media can be derived. The present invention allows high-density, high-resolution, high-speed recording of data that is highly compatible with the full visible-light spectrum.